H23

EPIDEMIOLOGICAL PATTERNS OF ENDEMIC BURKITT'S LYMPHOMA IN NORTHERN TANZANIA

Alberto Farolfi[1], Nestory Masalu[2], Gerardo Musuraca[1], Patrizia Serra[1], Angela Ragazzini[1], Lucas Faustine[2], Dino Amadori[1], on behalf of *Associazione Vittorio Tison*

[1]Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (I.R.S.T.), Meldola (FC), Italy; [2]Bugando Medical Center, Mwanza, Tanzania

Background. Burkitt's lymphoma (BL) is a highly proliferative B-cell cancer linked to c-MYC translocation. Although a rare disease worldwide, in African children it is defined as endemic because of its relatively high incidence. In 95% of cases it is associated with EBV and usually presents with facial (mandibular) tumors. Conversely, sporadic BL, rarely associated with EBV, typically presents with abdominal masses. Malaria and HIV infection are other endemic burdens in south-west African children, but a link between these diseases has yet to be confirmed.

Methods. To obtain information on the epidemiology and possible risk factors of endemic BL, we analyzed data from hospital registries of two regions surrounding Lake Victoria in Tanzania: Mara, a rural area in the east and the more urbanized Mwanza in the north-west.

Results. Although malaria was confirmed as endemic in both regions, its incidence in childhood is difficult to determine, whereas HIV incidence was only 3%. Among the 947 cases of BL diagnosed between 2000 and 2009, 493 (52%) were from Mara, and 454 (48%) from Mwanza. The disease occurred more commonly in males (M:F ratio 1.4:1) and at a younger age than females (mean age 6.8 *vs*. 7.6 years; $p<0.0001$). The majority of females (57%) presented with abdominal disease, with or without mandibular involvement, whereas facial tumors were more frequent in males (51%), a difference that proved statistically significant ($p<0.0001$).

Conclusions. BL is potentially curable with chemotherapy. In Western countries a strong correlation has been found between BL and HIV infection. However, the low incidence of HIV in our African population indicates that other causal factors may be present, such as malaria or intestinal parasites, which could independently modulate BL risk by influencing immune response to EBV. Interestingly, there seems to be an imbalance in presentation pattern and in age-incidence between males and females. Further collaborative research could help to identify risk factors of BL in African children and to improve currently available treatment.